

What is Claimed is:

1. An air duct system for conveying and filtering a stream of air, comprising:

an air duct adapted to convey the stream of air, the air duct having a generally tubular shape and comprising a fabric wall; and

an inflatable filter having a generally conical shape when inflated and attached to the fabric wall such that substantially the entire stream of air that passes through the air duct also passes through the inflatable filter.
2. The air duct system of claim 1, wherein the inflatable filter is in the shape of a cone.
3. The air duct system of claim 1, further comprising a first zipper that couples the inflatable filter to the air duct.
4. The air duct system of claim 3, further comprising a second zipper that couples the inflatable filter to the air duct.
5. The air duct system of claim 1, wherein the inflatable filter includes a plurality of pleats that are interconnected to limit the extent to which the inflatable filter may billow.
6. The air duct system of claim 1, further comprising a blower and a pre-filter, wherein the blower with respect to a flow direction of the stream of air is downstream of the pre-filter and upstream of the inflatable filter.
7. The air duct system of claim 6, wherein the pre-filter is more porous than the inflatable filter.

8. The air duct system of claim 1, wherein the air duct comprises a pliable fabric.

9. The air duct system of claim 8, wherein the pliable fabric is porous.

10. The air duct system of claim 1, wherein the air duct is substantially cylindrical.

11. The air duct system of claim 1, wherein the air duct defines a plurality of discharge openings.

12. An air duct system for conveying and filtering a stream of air, comprising:

an air duct adapted to convey the stream of air, the air duct having a generally tubular shape and comprising a fabric wall;

an inflatable filter having a generally conical shape when inflated and attached to the fabric wall such that substantially the entire stream of air that passes through the air duct also passes through the inflatable filter;

a first releasable circumferential connector coupling the inflatable filter to the air duct;

a second releasable circumferential connector coupling the inflatable filter to the air duct; and

a removable collar attached to the inflatable filter and attached to the first releasable circumferential connector and the second releasable circumferential connector, wherein the air duct includes an upstream duct and a downstream duct with the removable collar interposed therebetween via the first releasable circumferential connector and the second releasable circumferential connector.

13. The air duct system of claim 12, wherein at least one of the first and second releasable circumferential connectors includes mating strips of polymer material, each strip including at least one protrusion and at least one groove, the protrusion of one strip adapted to frictionally engage in the groove of the other strip.

14. The air duct system of claim 13, wherein each strip includes two grooves and two protrusions.

15. The air duct system of claim 13, wherein each strip includes three grooves and three protrusions.

16. The air duct system of claim 13, wherein the strips of polymer material are made by extrusion.

17. The air duct system of claim 12, wherein at least one of the first and second releasable circumferential connectors is provided in the form of metal strips having teeth adapted to engage and disengage upon movement of a slider mounted thereto.

18. A releasable circumferential connector adapted to connect first and second sections of fabric duct together, the releasable circumferential connector comprising:

a first strip of polymer material having a base from which at least two protrusions extend forming a void therebetween; and

a second strip of polymer material having a base from which at least two protrusions extend forming a void therebetween at least one of the protrusions of the first strip adapted to frictionally fit into the void of the second strip, the first strip being attached to the first section of fabric duct, the second strip being attached to the second section of fabric duct.

19. The releasable circumferential connector of claim 18, wherein the first and second strip each include three protrusions and two voids.

20. The releasable circumferential connector of claim 19, further including a head provided at an end of each protrusion forming a shoulder, the shoulders of the first strip interlocking against the shoulders of the second strip.

21. The releasable circumferential connector of claim 18, wherein the first and second strips are made of extruded plastic.

22. An air duct system, comprising:
an air duct having a generally tubular fabric wall;
an inflatable filter having a generally conical shape; and
a releasable circumferential connector joining the inflatable filter to the air duct, the releasable circumferential connector including a first strip attached to the air duct and a second strip attached to the inflatable filter, each strip including a base from which at least two protrusions extend forming a void therebetween, one of the protrusions of each strip being frictionally interfit into the void of the other strip.

23. The air duct system of claim 22, wherein each strip includes at least three protrusions and two voids.

24. The air duct system of claim 22, further including a head provided at an end of each protrusion forming a shoulder, the shoulder of the first strip interlocking against the shoulders of the second strip.

25. The air duct system of claim 22, wherein the releasable circumferential connector is manufactured from extruded plastic.

26. The air duct system of claim 22, further including a second section of air duct, the second section surrounding the inflatable filter and being attached to the air duct using a second releasable circumferential connector.